

Attorney Docket No. 200406

PATENT  
TECHNICAL  
SECTION 1600/2000

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U.S. PATENT & TRADEMARK OFFICE

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of:

Nie et al.

Group Art Unit: 1765

Application No. 09/405,653

Examiner: Unassigned

Filed: September 24, 1999

For: WATER-SOLUBLE LUMINESCENT  
QUANTUM DOTS AND BIOMOLECULAR  
CONJUGATES THEREOF AND RELATED  
COMPOSITIONS AND METHOD OF USE

**DECLARATION UNDER 37 C.F.R. § 1.132 BY DR. SHUMING NIE**

1. I, Shuming Nie, am an inventor of the subject matter disclosed and claimed in the above-identified patent application

2. The data set forth below were generated under my direction.

3. Using the methods set forth in Example 2 of U.S. Patent 5,990,749 (Weiss et al.), we sought to generate a water-soluble nanoparticle comprising a CdSe core, a CdS shell, and 3-mercaptopropyl-trimethoxy silane linkers. In following the procedure set forth by Weiss et al., the nanoparticles generated formed an insoluble gel in water. It is my opinion that the silane groups of the linker polymerize and crosslink shortly after attachment of the linker, thereby forming a gel.

4. The nanoparticle gel formed by the method of Example 2 is not considered a "solution," as this term is commonly used in the art.

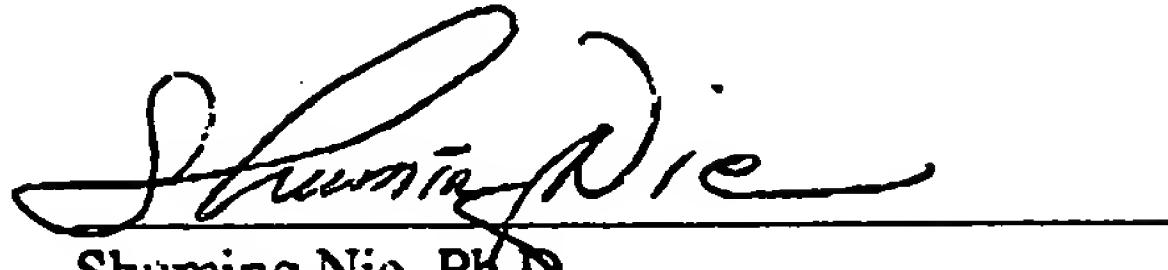
5. I hereby declare that all statements made herein of my own knowledge are true, that all statements made on information and belief are believed to be true, that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false

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statements may jeopardize the validity of the application or any patent issued thereon.

Date: 2-19-01

  
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Shuming Nie, Ph.D.